

## **ABSTRACT**

A heterogeneous computer system, a heterogeneous input/output system and a data back-up method for the systems. An I/O subsystem A for open system and an I/O subsystem B for a mainframe are connected by a communication unit. In order to back up the data from at least a disk connected to the I/O subsystem B in a MT library system and in order to permit the mainframe to access the data in the I/O subsystem B, the I/O subsystem A includes a table for assigning a vacant memory address in a local subsystem to the memory of the I/O subsystem for an open system. A request of variable-length record format received from the mainframe is converted into a fixed-length record format for the subsystem B. The disk designated according to the table is accessed, and the data thus obtained is sent to the mainframe and backed up in the back-up system.